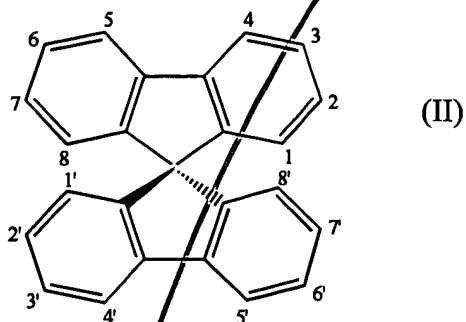
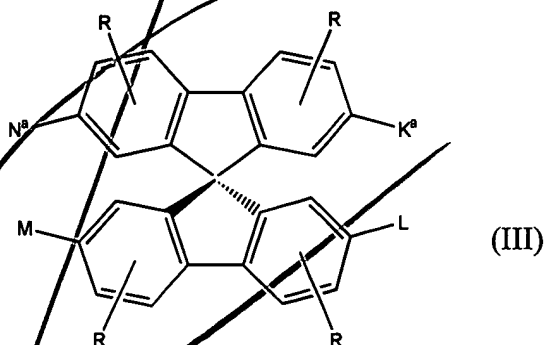


6. The laser of claim 5, wherein said spiro compound is a spirobifluorene of formula (II)



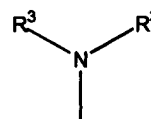
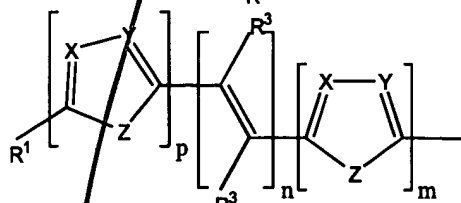
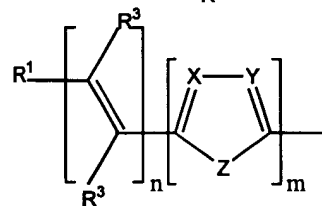
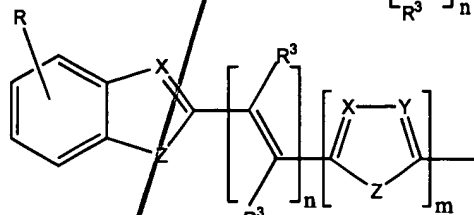
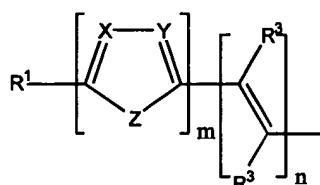
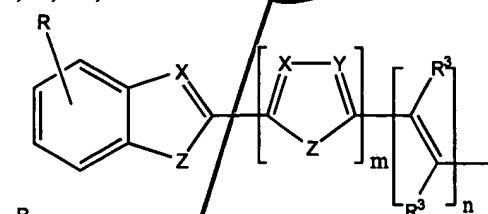
where the benzo groups can be substituted and/or fused independently of one another.

7. The laser of claim 5, wherein said spiro compound is a spirobifluorene derivative of formula (III)



wherein:

$K^a$ , L, M,  $N^a$  are identical or different and are



R is identical or different and has the same meaning as  $K^a$ , L, M,  $N^a$  or is H, a linear or branched alkyl, alkoxy or ester group having from 1 to 22 carbon atoms, -CN, -NO<sub>2</sub>, -NR<sup>2</sup>R<sup>3</sup>, -Ar or -O-Ar;

Ar is phenyl, biphenyl, 1-naphthyl, 2-naphthyl, 2-thienyl, or 2-furyl, with each optionally substituted with one or two radicals R;

m, n, p are 0, 1, 2 or 3;

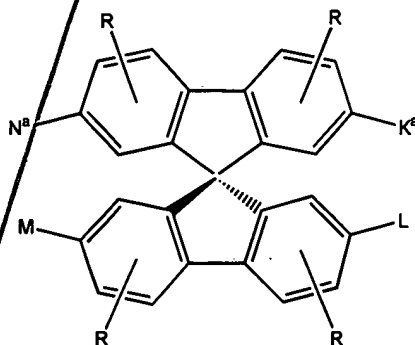
X, Y are identical or different and are CR or nitrogen;

Z is -O-, -S-, -NR<sup>1</sup>-, -CR<sup>1</sup>R<sup>4</sup>-, -CH=CH-, or -CH=N-;

R<sup>1</sup>, R<sup>4</sup> are identical or different and have the same meaning as R; and

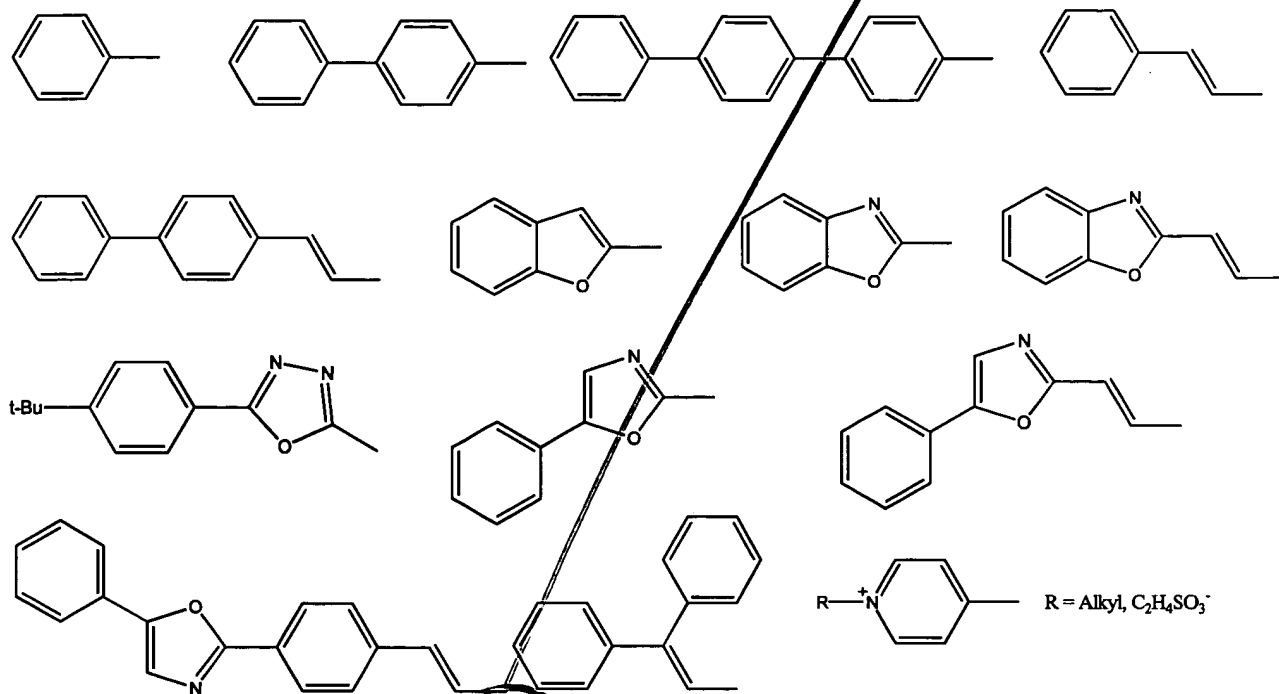
R<sup>2</sup>, R<sup>3</sup> are identical or different and are H, a linear or branched alkyl group having from 1 to 22 carbon atoms, -Ar, or 3-methylphenyl.

8. The laser of claim 5, wherein said spiro compound is a spirobifluorene compound selected from the group consisting of the spirobifluorene compounds of the formula (IIIa) to (IIIg), wherein formula (III) is:

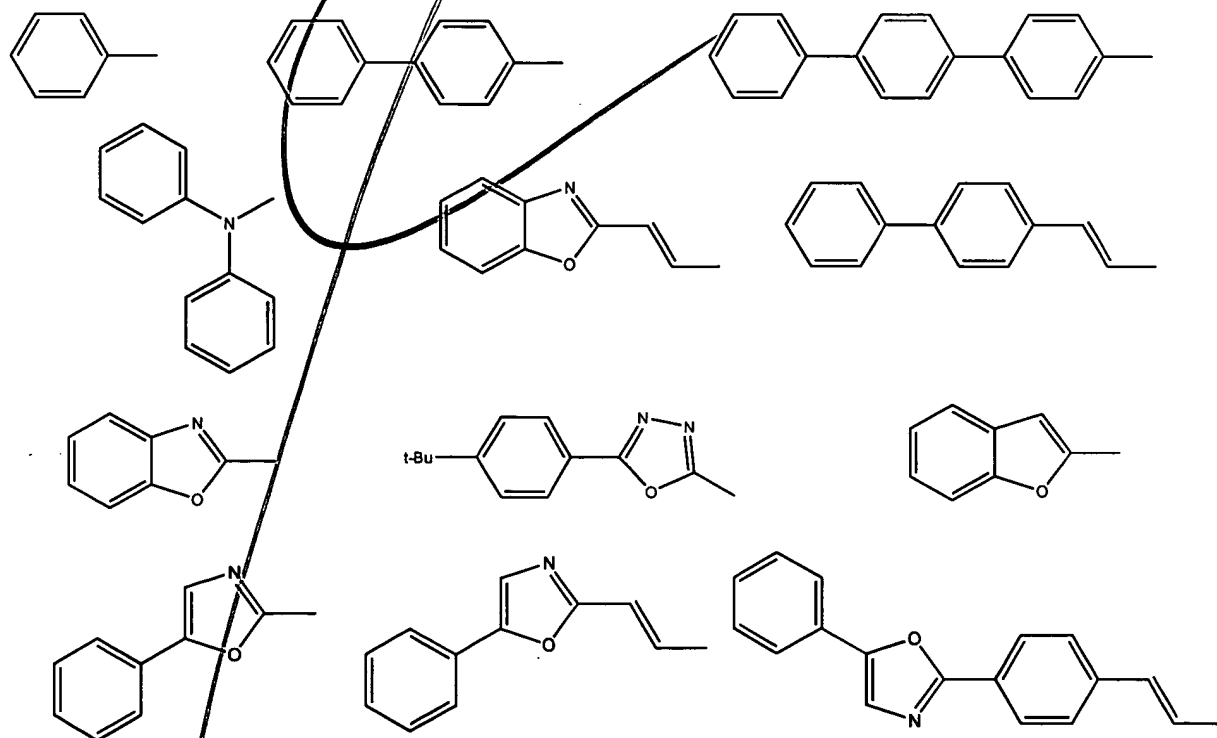


and the spirobifluorene compounds (IIIa to IIIg) are derivatives of formula (III) as follows:

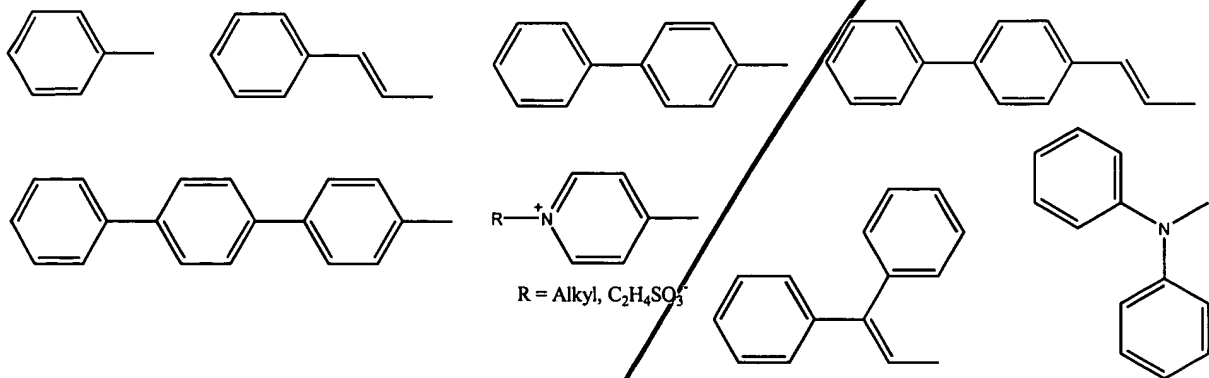
IIIa)  $K^a = L = M = N^a$  and is selected from the group consisting of:



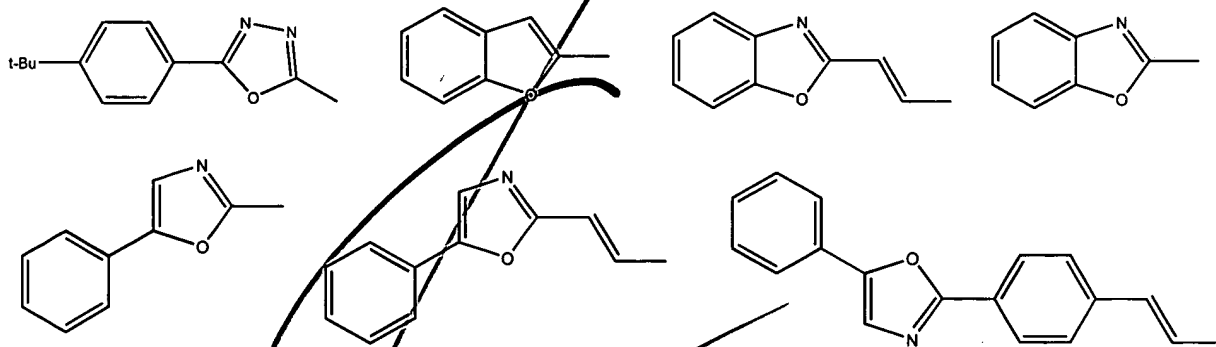
IIIb)  $K^a = M = H$  and  $N^a = L$  and is selected from the group consisting of:



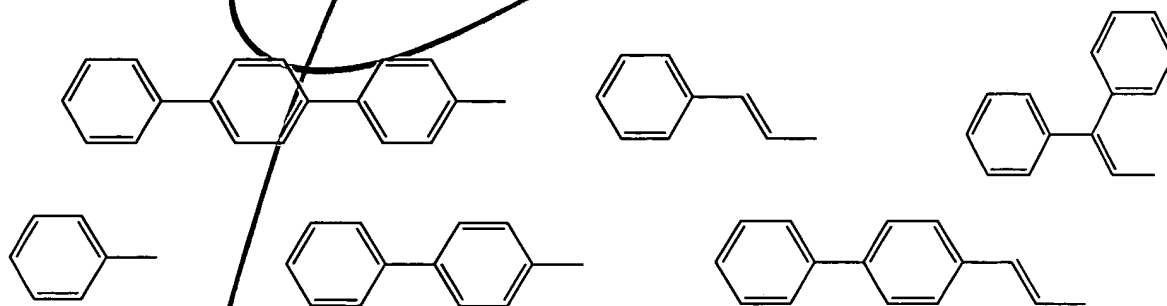
IIIc)  $K^a = M$  and is selected from the group consisting of:



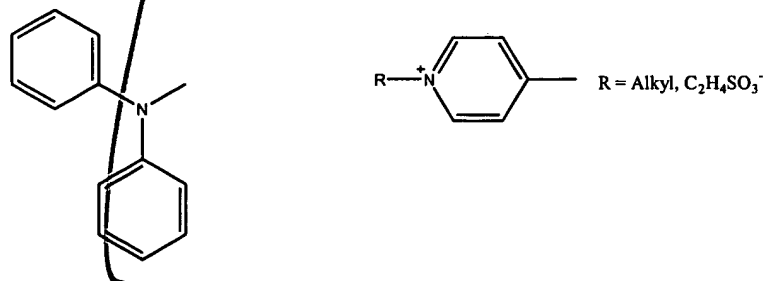
and  $N^a = L$  and is selected from the group consisting of:



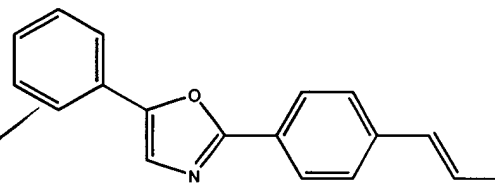
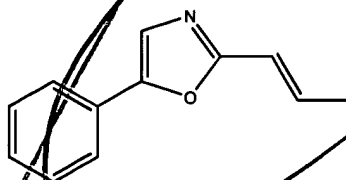
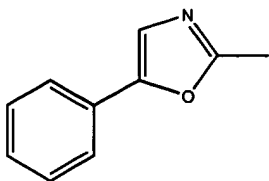
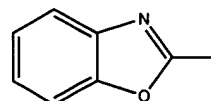
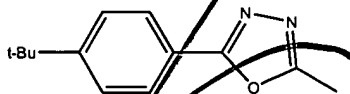
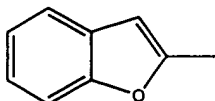
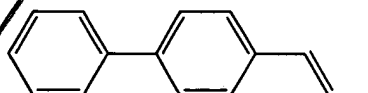
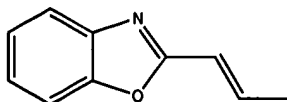
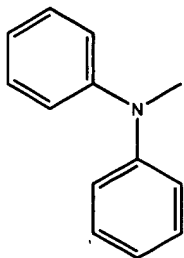
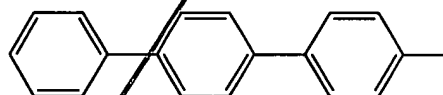
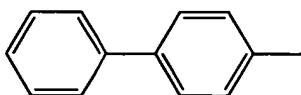
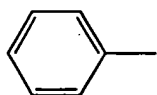
IIId)  $K^a = M$  and is selected from the group consisting of:



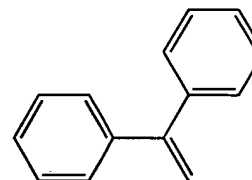
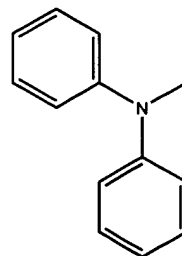
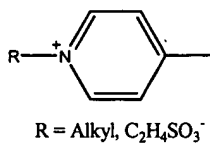
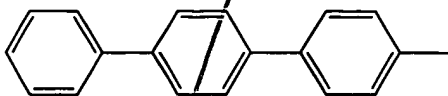
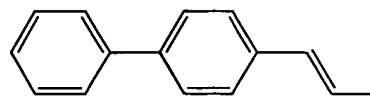
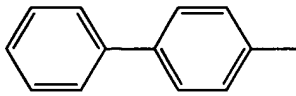
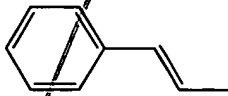
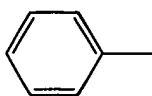
and  $N^a = L$  and is selected from the group consisting of:



IIIe)  $K^a = L = H$  and  $M = N^a$  and is selected from the group consisting of:

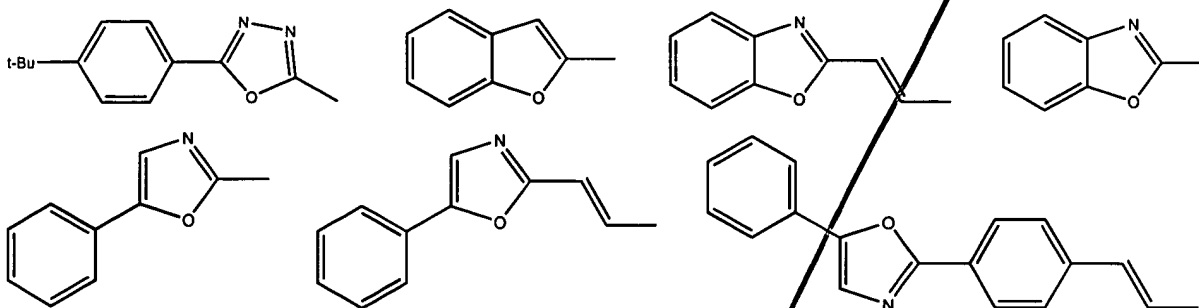


III f)  $K^a = L$  and is selected from the group consisting of:

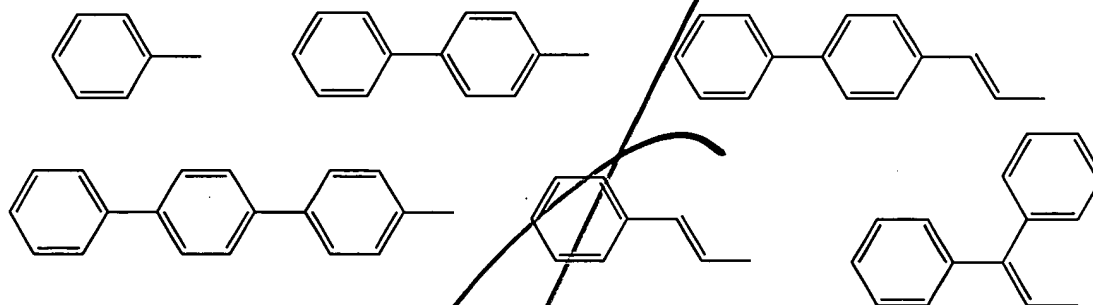


$R = \text{Alkyl}, \text{C}_2\text{H}_4\text{SO}_3^-$

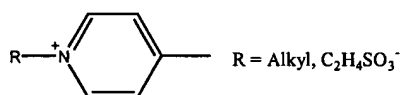
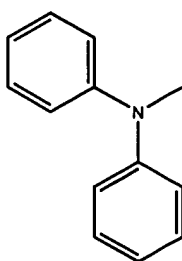
and  $M = N^a$  and is selected from the group consisting of:



IIIg)  $K^a = L$  and is selected from the group consisting of:



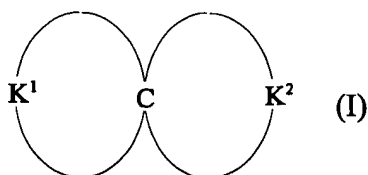
and  $M = N^a$  and is selected from the group consisting of:



9. A laser system comprising:

- an optical pumping device selected from the group consisting of a flash lamp and a laser;
- a solid spiro compound of formula (I)

112 incomplete No  
Caridey gain Medium structure  
pawer Solid, legend?

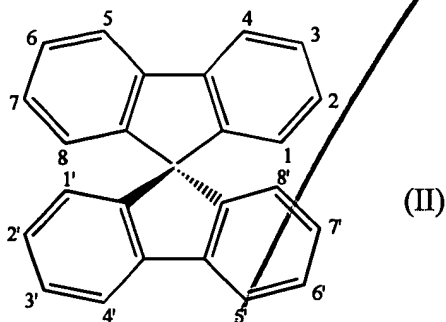


where  $K^1$  and  $K^2$  are, independently of one another, conjugated systems;

wherein excitation of the solid spiro compound is achieved by optical excitation with the

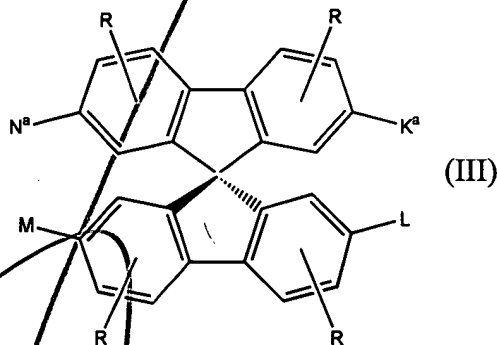
optical pumping device.

10. The laser system of claim 9, wherein said spiro compound is a spirobifluorene of formula (II)



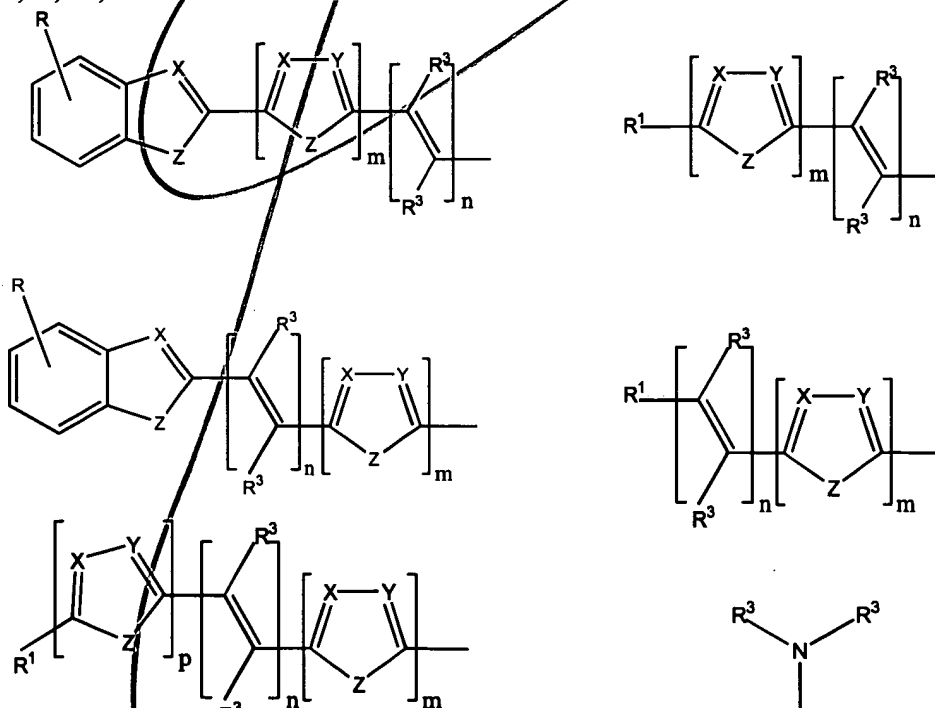
wherein the benzo groups can be substituted and/or fused independently of one another.

11. The laser system of claim 9, wherein said spiro compound is a spirobifluorene derivative of formula (III)



wherein:

$K^a$ , L, M,  $N^a$  are identical or different and are



R is identical or different and has the same meaning as  $K^a$ , L, M,  $N^a$  or is H, a linear

or branched alkyl, alkoxy or ester group having from 1 to 22 carbon atoms, -CN, -NO<sub>2</sub>, -NR<sup>2</sup>R<sup>3</sup>, -Ar or -O-Ar;

Ar is phenyl, biphenyl, 1-naphthyl, 2-naphthyl, 2-thienyl, or 2-furyl, with each optionally substituted with one or two radicals R;

m, n, p are 0, 1, 2 or 3;

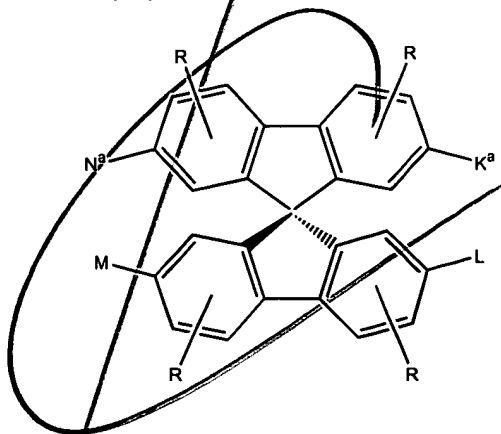
X, Y are identical or different and are CR or nitrogen;

Z is -O-, -S-, -NR<sup>1</sup>-, -CR<sup>1</sup>R<sup>4</sup>-, -CH=CH-, or -CH=N-;

R<sup>1</sup>, R<sup>4</sup> are identical or different and have the same meaning as R; and

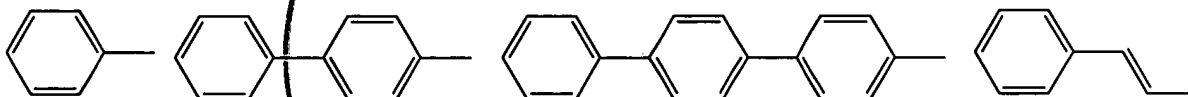
R<sup>2</sup>, R<sup>3</sup> are identical or different and are H, a linear or branched alkyl group having from 1 to 22 carbon atoms, -Ar, or 3-methylphenyl.

12. The laser system of claim 9, wherein said spiro compound is a spirobifluorene compound selected from the group consisting of the spirobifluorene compounds of the formula (IIIa) to (IIIg), wherein formula (III) is:



and the spirobifluorene compounds (IIIa to IIIg) are derivatives of formula (III) as follows:

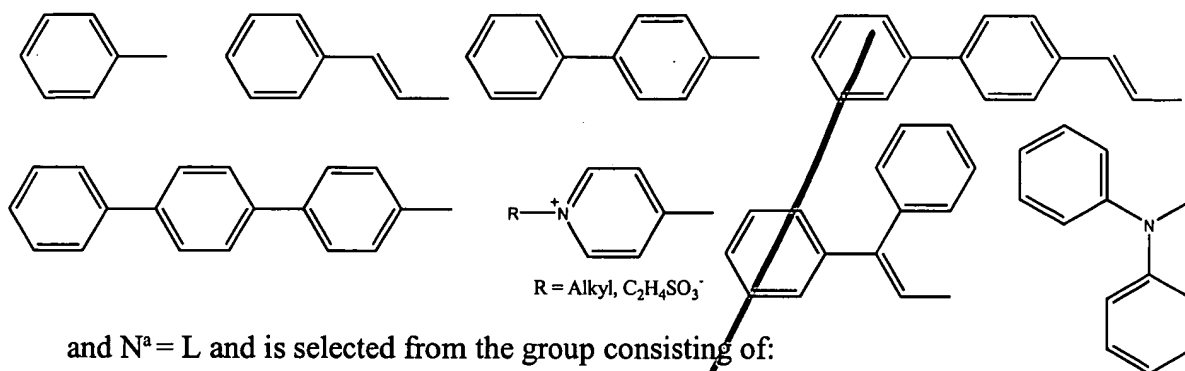
IIIa) K<sup>a</sup> = L = M = N<sup>a</sup> and is selected from the group consisting of:



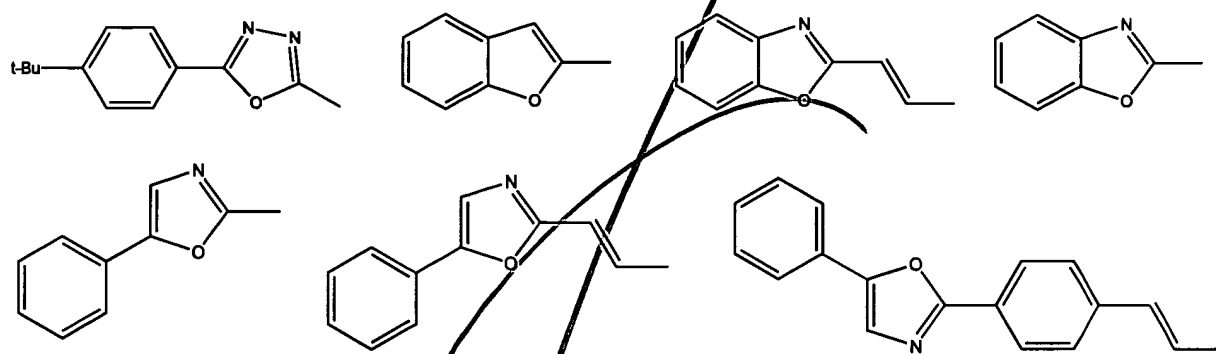




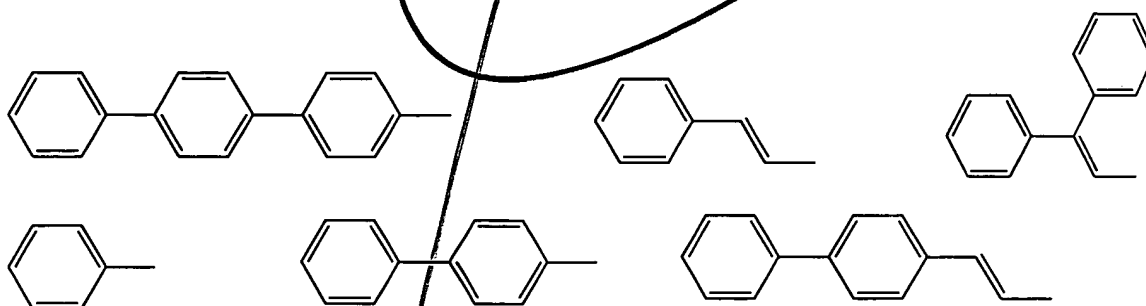
IIIc)  $K^a = M$  and is selected from the group consisting of:



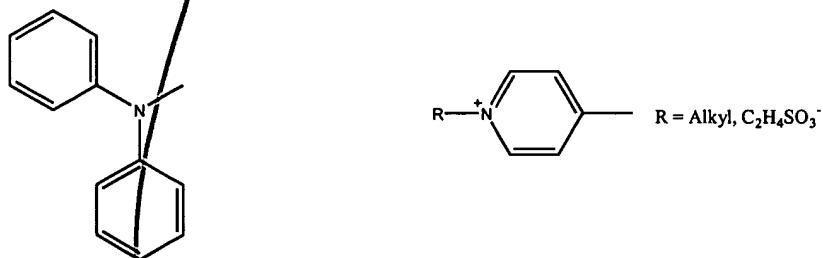
and  $N^a = L$  and is selected from the group consisting of:



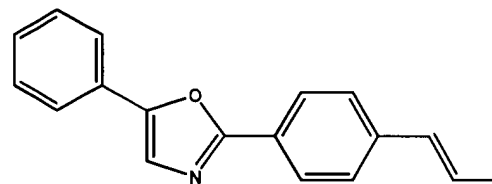
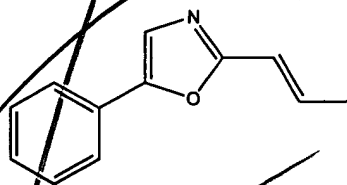
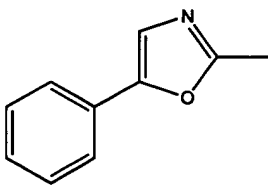
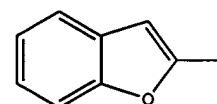
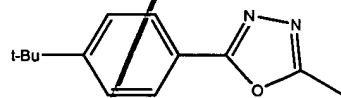
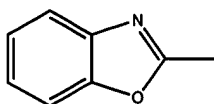
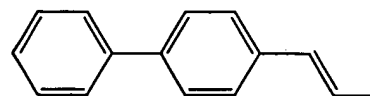
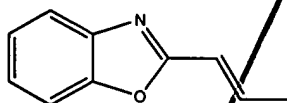
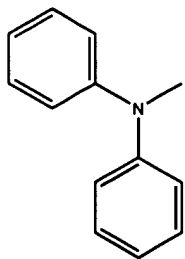
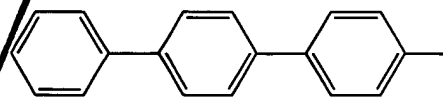
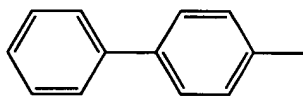
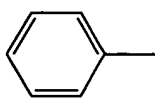
IIId)  $K^a = M$  and is selected from the group consisting of:



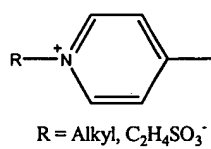
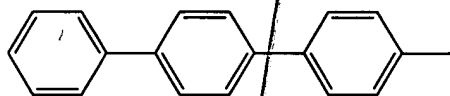
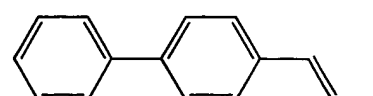
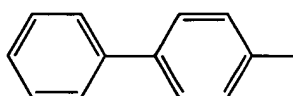
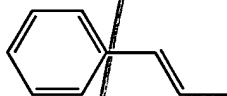
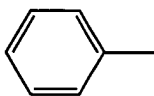
and  $N^a = L$  and is selected from the group consisting of:



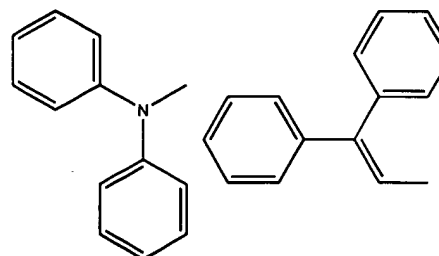
IIIe)  $K^a = L = H$  and  $M = N^a$  and is selected from the group consisting of:



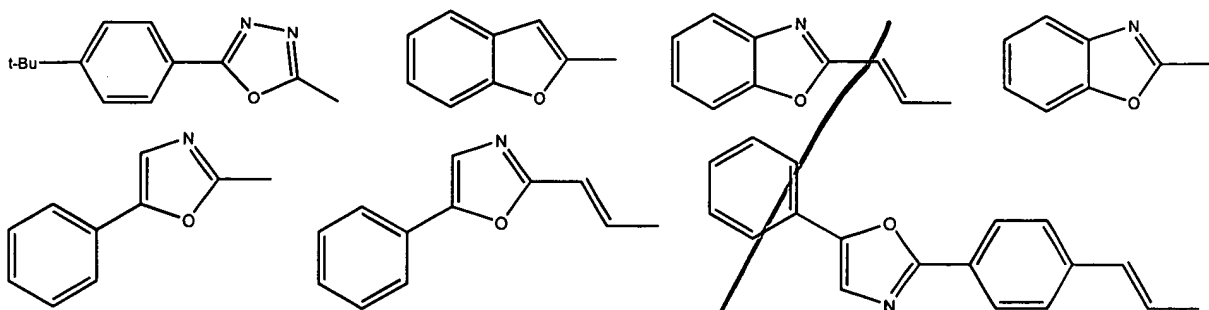
III f)  $K^a = L$  and is selected from the group consisting of:



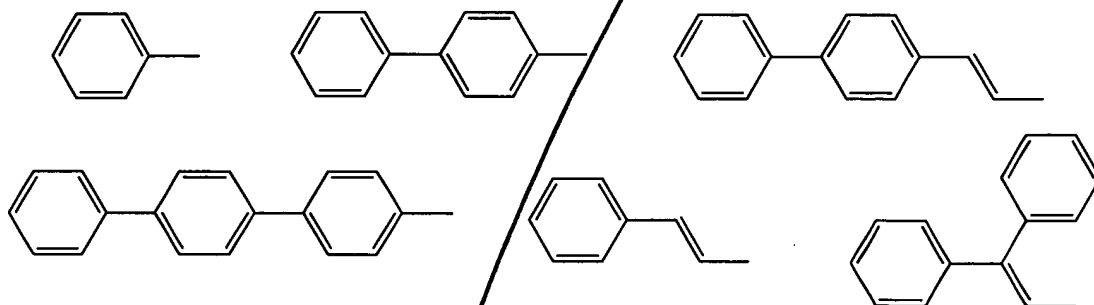
R = Alkyl, C<sub>2</sub>H<sub>4</sub>SO<sub>3</sub><sup>-</sup>



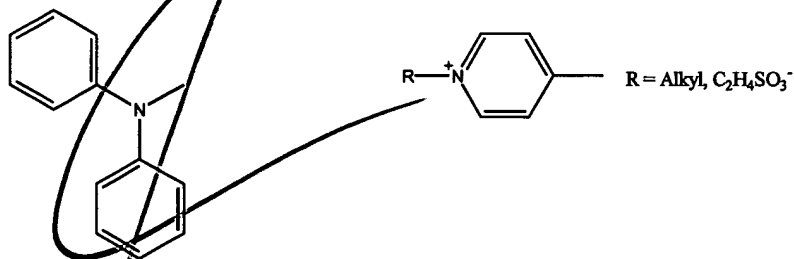
and  $M = N^a$  and is selected from the group consisting of:



IIIg)  $K^a = L$  and is selected from the group consisting of:

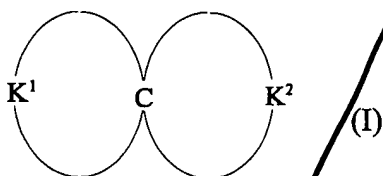


and  $M = N^a$  and is selected from the group consisting of:



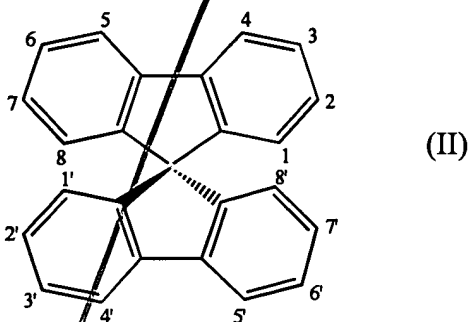
13. The laser system of claim 9, wherein the optical pumping device is a laser.
14. The laser system of claim 10, wherein the optical pumping device is a laser.
15. The laser system of claim 11, wherein the optical pumping device is a laser.
16. The laser system of claim 12, wherein the optical pumping device is a laser.
17. A method for emitting a narrow band width of optical light comprising exciting a solid

spiro compound of formula (I)



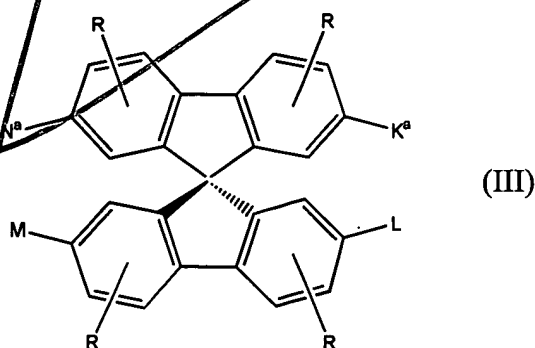
where K¹ and K² are, independently of one another, conjugated systems with a laser.

18. The method of claim 17, wherein said solid spiro compound is a spirobifluorene of formula (II)



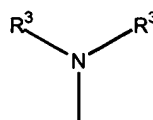
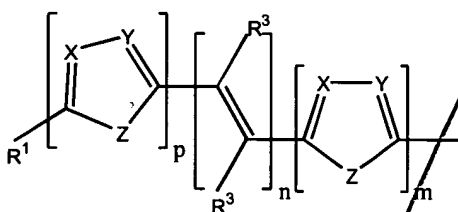
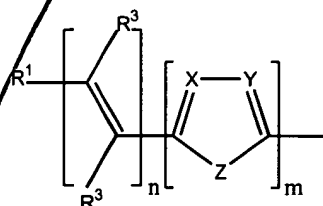
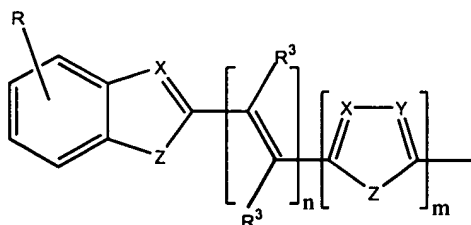
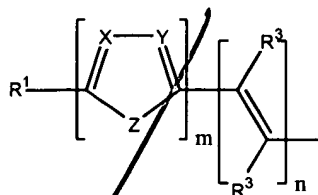
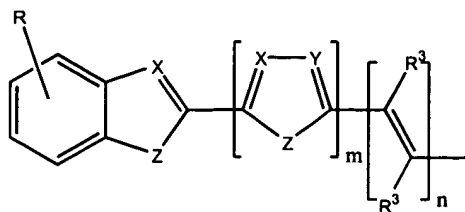
where the benzo groups can be substituted and/or fused independently of one another.

19. The method of claim 17, wherein said spiro compound is a spirobifluorene derivative of formula (III)



wherein:

Kᵃ, L, M, Nᵃ are identical or different and are



R is identical or different and has the same meaning as K<sup>a</sup>, L, M, N<sup>a</sup> or is H, a linear or branched alkyl, alkoxy or ester group having from 1 to 22 carbon atoms, -CN, -NO<sub>2</sub>, -NR<sup>2</sup>R<sup>3</sup>, -Ar or -O-Ar;

Ar is phenyl, biphenyl, 1-naphthyl, 2-naphthyl, 2-thienyl, or 2-furyl, with each optionally substituted with one or two radicals R;

m, n, p are 0, 1, 2 or 3;

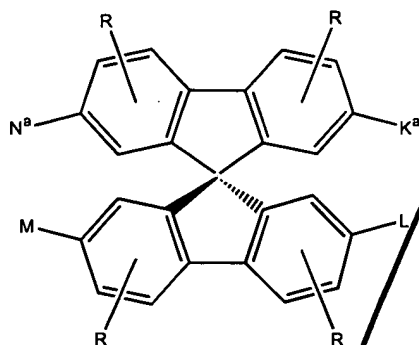
X, Y are identical or different and are CR or nitrogen;

Z is -O-, -S-, -NR<sup>1</sup>-, -CR<sup>1</sup>R<sup>4</sup>-, -CH=CH-, or -CH=N-;

R<sup>1</sup>, R<sup>4</sup> are identical or different and have the same meaning as R; and

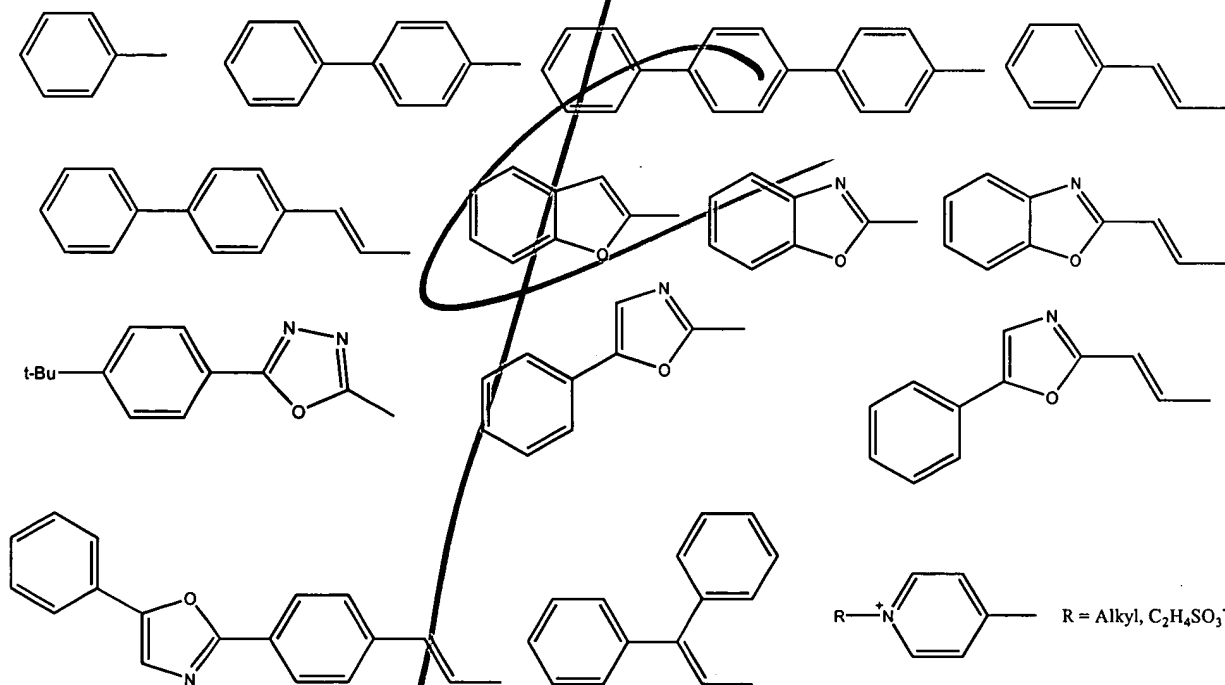
R<sup>2</sup>, R<sup>3</sup> are identical or different and are H; a linear or branched alkyl group having from 1 to 22 carbon atoms, -Ar, or 3-methylphenyl.

20. The method of claim 17, wherein said spiro compound is a spirobifluorene compound selected from the group consisting of the spirobifluorene compounds of the formula (IIIa) to (IIIg), wherein formula (III) is:

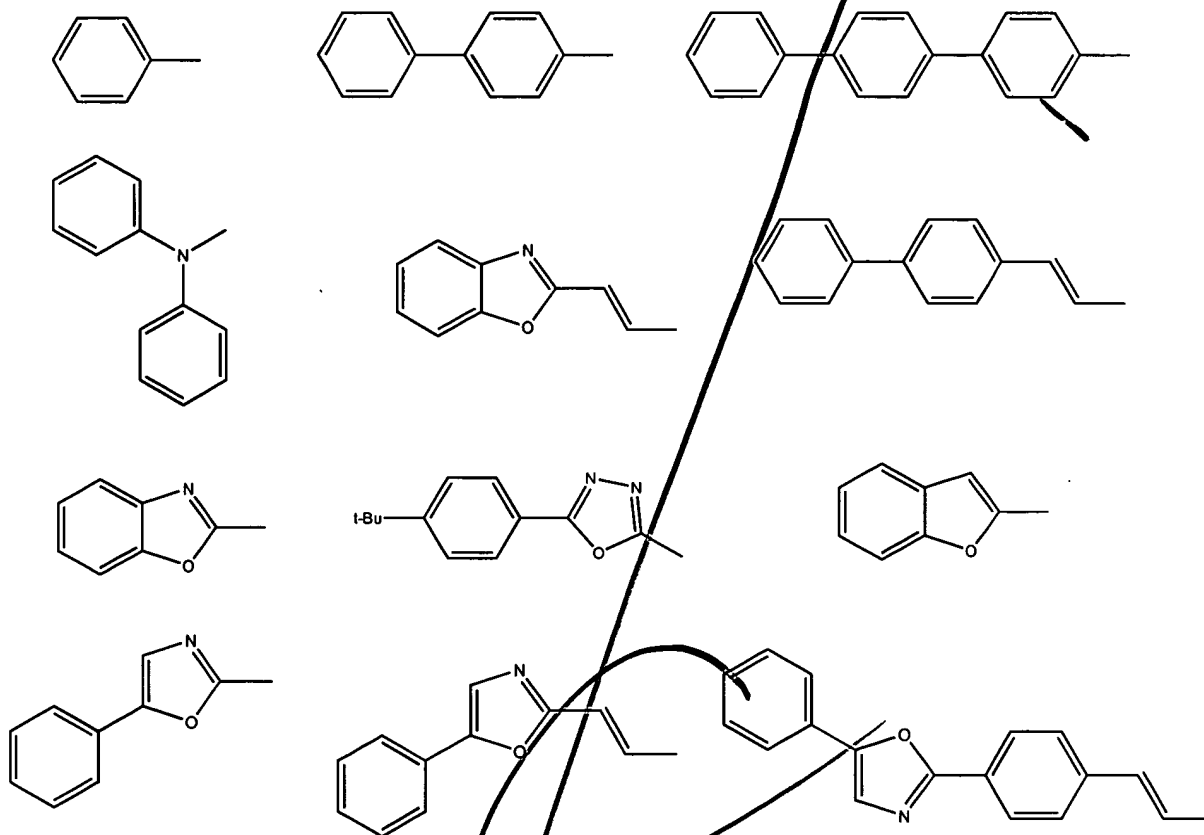


and the spirobifluorene compounds (IIIa to IIIg) are derivatives of formula (III) as follows:

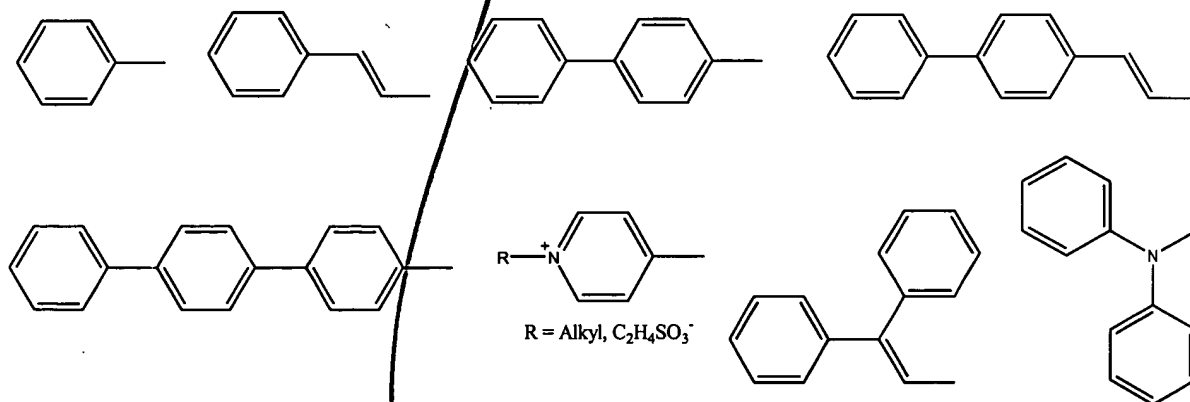
IIIa)  $K^a = L = M = N^a$  and is selected from the group consisting of:



IIIb)  $K^a = M = H$  and  $N^a = L$  and is selected from the group consisting of:

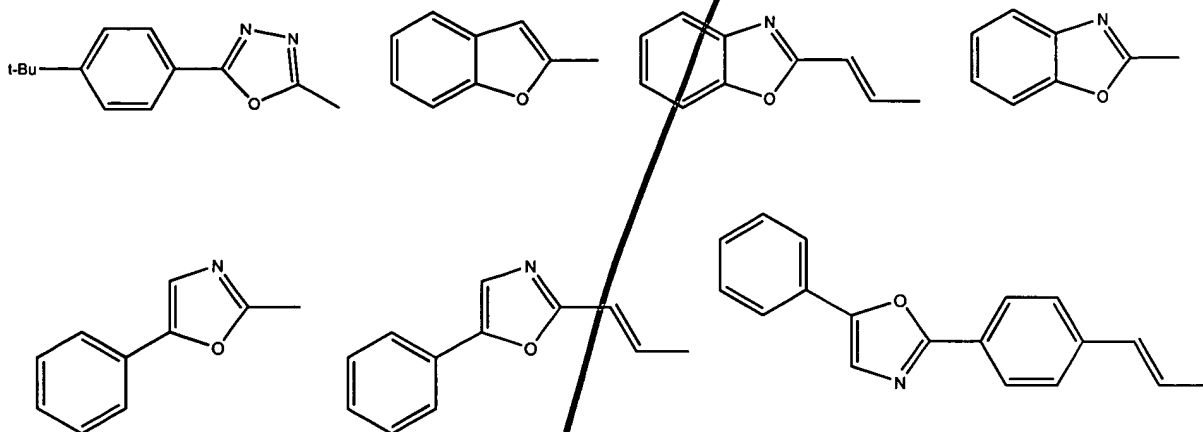


IIIc)  $K^a = M$  and is selected from the group consisting of:

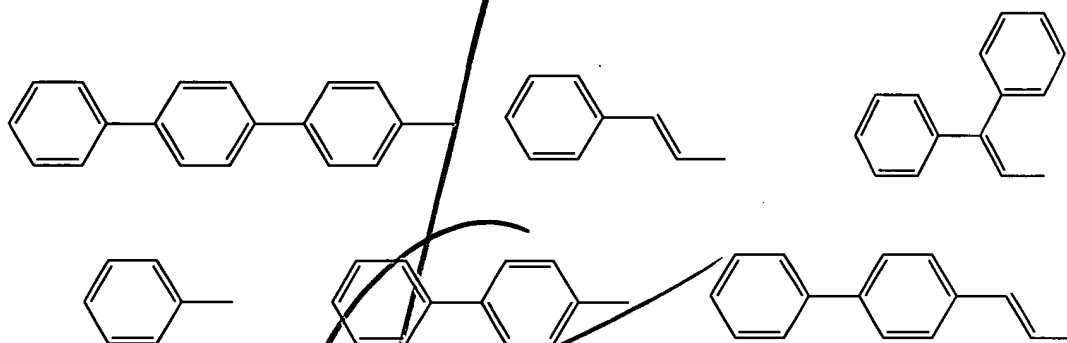




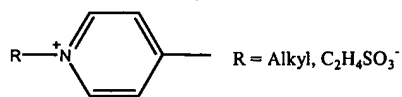
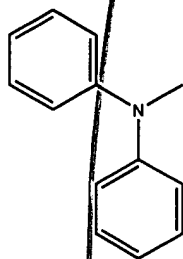
and  $N^a = L$  and is selected from the group consisting of:



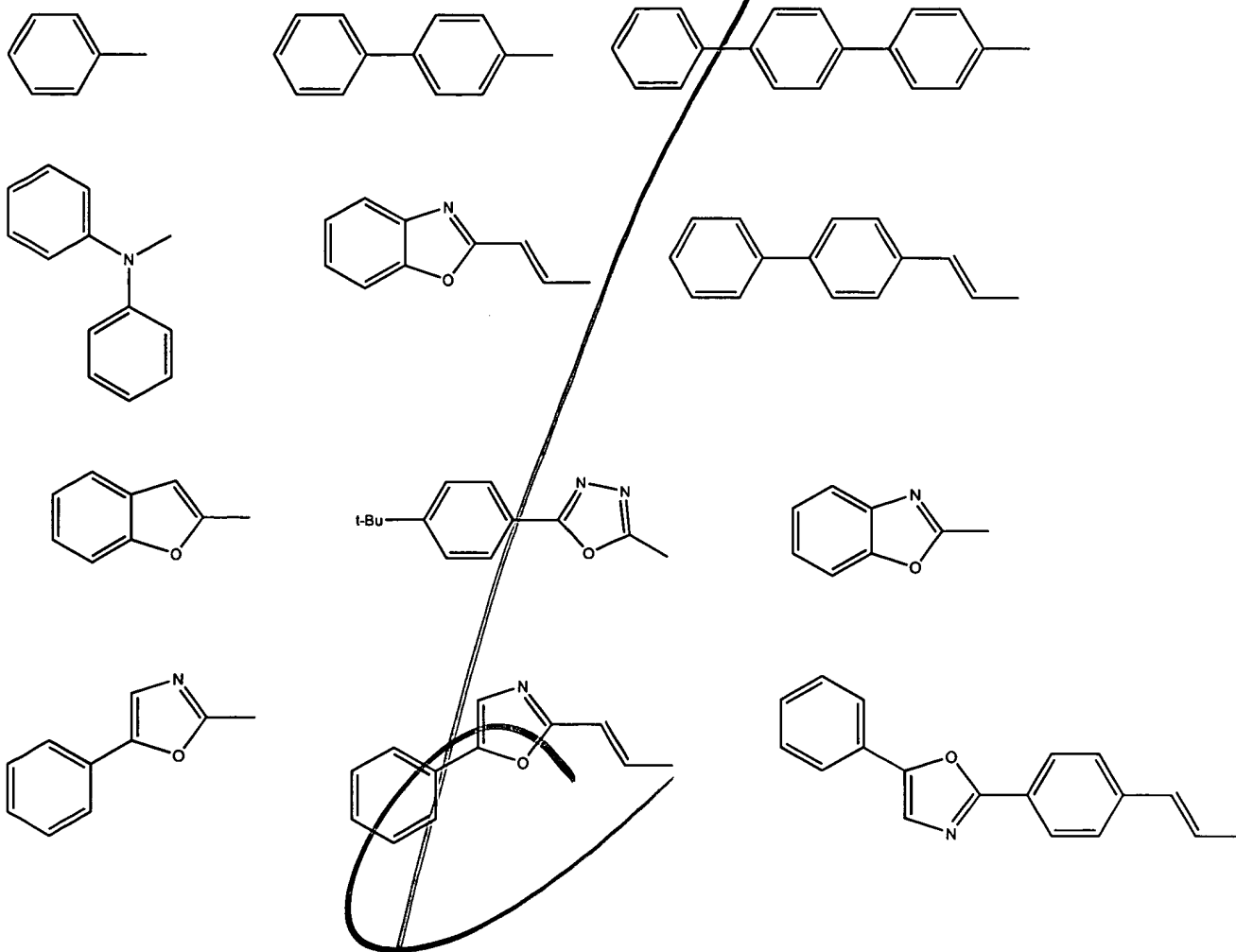
IIIId)  $K^a = M$  and is selected from the group consisting of:



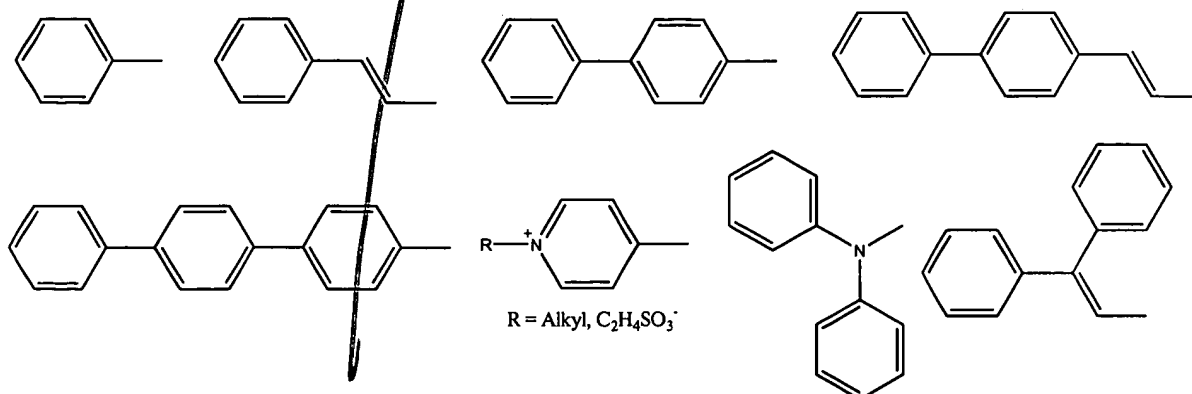
and  $N^a = L$  and is selected from the group consisting of:



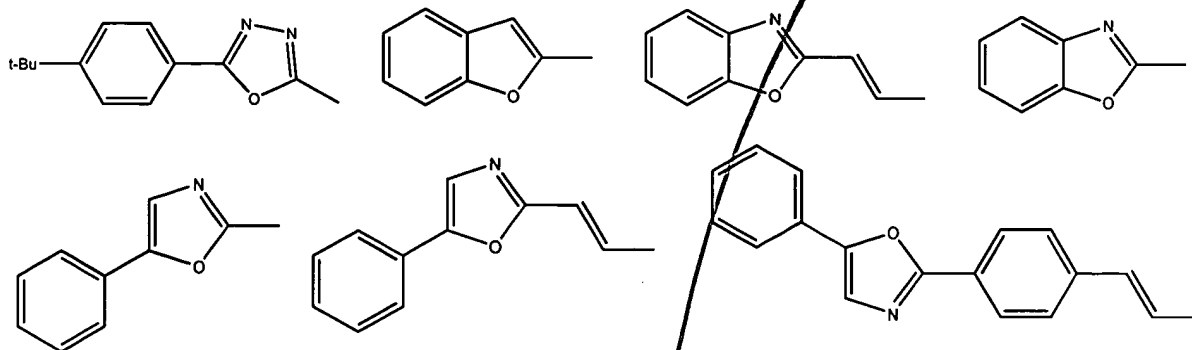
IIIe)  $K^a = L = H$  and  $M = N^a$  and is selected from the group consisting of:



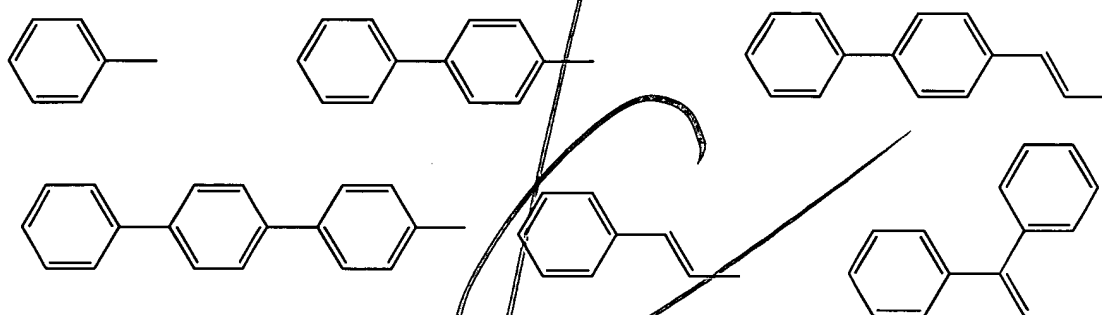
III f)  $K^a = L$  and is selected from the group consisting of:



and  $M = N^a$  and is selected from the group consisting of:



IIIg)  $K^a = L$  and is selected from the group consisting of:



and  $M = N^a$  and is selected from the group consisting of:

